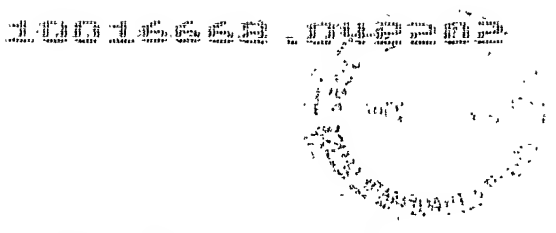


FIG. 2



1	1	T	P	V	S	E	K	Q	L	A	E	V	V	A	N	T	I	T	P	L	M	K	A	O	S	V	P	G	M	A	V	A	V	I	Y	O	G	K	P	H	Y	T	F	G	K	A	D	I	A		
2	1	A	K	L	T	E	E	Q	Q	I	A	D	I	V	N	R	T	I	T	P	L	M	K	A	O	S	V	P	G	M	A	V	A	V	I	Y	O	G	K	P	H	Y	T	F	G	K	A	D	I	A	
3	1	T	A	K	L	T	E	E	Q	Q	I	A	D	I	V	N	R	T	I	T	P	L	M	K	A	O	S	V	P	G	M	A	V	A	V	I	Y	O	G	K	P	H	Y	T	F	G	K	A	D	I	A
4	1	Y	A	R	G	E	A	P	L	T	A	A	V	D	G	I	I	Q	P	M	L	K	E	Y	R	I	P	G	M	A	V	A	V	I	Y	O	G	K	P	H	Y	T	F	G	K	A	D	I	A		
1	51	N	K	P	V	T	P	Q	T	L	F	E	L	G	S	I	S	K	T	F	T	G	V	L	G	G	D	A	I	A	R	G	E	I	S	L	D	D	A	V	T	R	Y	W	P	O	L	T	G	K	Q
2	51	N	K	P	V	T	P	Q	T	L	F	E	L	G	S	V	S	K	T	F	T	G	V	L	G	G	D	A	I	A	R	G	E	I	S	L	D	D	A	V	T	R	Y	W	P	O	L	T	G	K	Q
3	51	N	K	P	V	T	P	Q	T	L	F	E	L	G	S	V	S	K	T	F	T	G	V	L	G	G	D	A	I	A	R	G	E	I	S	L	D	D	A	V	T	R	Y	W	P	O	L	T	G	K	Q
4	51	G	Q	R	V	S	E	Q	T	L	F	E	I	G	S	V	S	K	T	L	T	A	T	L	G	A	Y	A	A	V	K	G	G	F	E	L	D	D	K	V	S	Q	H	A	P	W	L	K	G	S	A
1	101	W	Q	G	I	R	M	L	D	L	A	T	T	T	A	G	G	L	P	L	Q	V	P	D	E	V	T	D	N	A	S	L	L	R	F	Y	Q	N	W	Q	P	Q	W	K	P	G	T	R	L	Y	
2	101	W	R	G	I	S	L	H	L	A	T	T	T	A	G	G	L	P	L	Q	V	P	D	E	V	T	D	N	A	S	L	L	R	F	Y	Q	N	W	Q	P	Q	W	K	P	G	T	R	L	Y		
3	101	W	R	G	I	S	L	H	L	A	T	T	T	A	G	G	L	P	L	Q	V	P	D	E	V	T	D	N	A	S	L	L	R	F	Y	Q	N	W	Q	P	Q	W	K	P	G	T	R	L	Y		
4	101	F	D	G	V	T	M	A	E	L	A	T	Y	S	A	G	G	L	P	L	Q	V	P	D	E	V	T	D	N	A	S	L	L	R	F	Y	Q	N	W	Q	P	Q	W	K	P	G	T	R	L	Y	
1	151	A	N	A	S	I	G	L	F	G	A	L	A	V	K	P	S	G	M	P	Y	E	O	A	M	T	R	V	L	K	P	L	K	L	D	H	T	W	I	N	V	P	K	A	E	E	A	H	Y	A	
2	151	A	N	A	S	I	G	L	F	G	A	L	A	V	K	P	S	G	M	P	Y	E	O	A	M	T	R	V	L	K	P	L	K	L	D	H	T	W	I	N	V	P	K	A	E	E	A	H	Y	A	
3	151	S	N	A	S	I	G	L	F	G	A	L	A	V	K	P	S	G	M	P	Y	E	O	A	M	T	R	V	L	K	P	L	K	L	D	H	T	W	I	N	V	P	K	A	E	E	A	H	Y	A	
4	151	S	N	A	S	I	G	L	F	G	A	L	A	V	K	P	S	G	M	P	Y	E	O	A	M	T	R	V	L	K	P	L	K	L	D	H	T	W	I	N	V	P	K	A	E	E	A	H	Y	A	
1	201	W	G	Y	R	D	G	K	A	V	R	V	S	P	G	M	L	D	A	Q	A	Y	G	V	K	T	N	V	Q	D	M	A	N	W	V	M	A	N	M	A	P	E	N	V	A	D	A	S	L	K	Q
2	201	W	G	Y	R	D	G	K	A	V	R	V	S	P	G	M	L	D	A	Q	A	Y	G	V	K	T	N	V	Q	D	M	A	N	W	V	M	A	N	M	A	P	E	N	V	A	D	A	S	L	K	Q
3	201	W	G	Y	R	D	G	K	A	V	R	V	S	P	G	M	L	D	A	Q	A	Y	G	V	K	T	N	V	Q	D	M	A	N	W	V	M	A	N	M	A	P	E	N	V	A	D	A	S	L	K	Q
4	201	Y	G	Y	K	E	D	K	P	V	R	V	T	P	G	V	L	A	A	E	A	Y	G	I	K	T	G	S	A	D	L	L	K	F	T	E	A	N	M	G	Y	Q	G	D	A	A	L	K	T		
1	251	G	I	A	L	A	Q	S	R	Y	W	R	I	G	S	M	Y	Q	G	L	G	W	E	M	L	N	W	P	V	E	A	N	T	I	V	E	G	S	D	S	K	V	A	L	A	P	L	P	V	A	E
2	251	G	I	A	L	A	Q	S	R	Y	W	R	I	G	S	M	Y	Q	G	L	G	W	E	M	L	N	W	P	V	E	A	N	T	I	V	E	G	S	D	S	K	V	A	L	A	P	L	P	V	A	E
3	251	A	I	I	A	S	Q	S	R	Y	F	Q	A	G	D	M	F	Q	G	L	G	W	E	M	Y	S	W	P	I	N	P	Q	G	V	I	A	D	S	G	N	D	I	A	L	K	P	R	K	V	E	A
4	249	R	I	A	L	T	H	T	G	F	Y	S	V	G	D	M	T	Q	G	L	G	W	E	S	Y	A	P	L	T	E	Q	A	L	L	A	G	N	S	P	A	V	S	F	Q	A	N	P	V	T		
1	301	V	N	P	P	A	V	K	A	S	W	V	H	K	T	G	S	T	G	G	F	G	S	Y	V	A	F	I	P	E	K	O	I	G	I	V	M	L	A	N	K	S	Y	P	N	P	A	R	V		
2	301	L	V	P	P	A	V	K	A	S	W	V	H	K	T	G	S	T	G	G	F	G	S	Y	V	A	F	I	P	E	K	O	I	G	I	V	M	L	A	N	K	S	Y	P	N	P	A	R	V		
3	301	L	V	P	P	A	V	K	A	S	W	V	H	K	T	G	S	T	G	G	F	G	S	Y	V	A	F	I	P	E	K	O	I	G	I	V	M	L	A	N	K	S	Y	P	N	P	A	R	V		
4	299	F	A	V	P	K	A	M	G	E	Q	R	L	Y	N	K	T	G	S	T	G	G	F	G	A	Y	V	A	F	V	P	A	R	G	I	A	I	V	M	L	A	N	R	N	Y	P	I	E	A	R	V
1	351	E	A	A	Y	H	I	L	E	A	L	Q																																							
2	351	K	A	A	Y	D	I	L	O	A	L	Q																																							
3	351	Q	A	A	Y	D	I	L	O	A	L	Q																																							
4	349	K	A	A	H	A	I	L	S	Q	L	A																																							

- 1 Enterbacter cloacae P05364 (SEQ ID NO: 1)
- 2 Citrobacter freundii P05193 (SEQ ID NO: 2)
- 3 Yersinia enterocolitica P45460 (SEQ ID NO: 3)
- 4 Klebsiella pneumoniae Q48437 (SEQ ID NO: 4)

FIG. 3



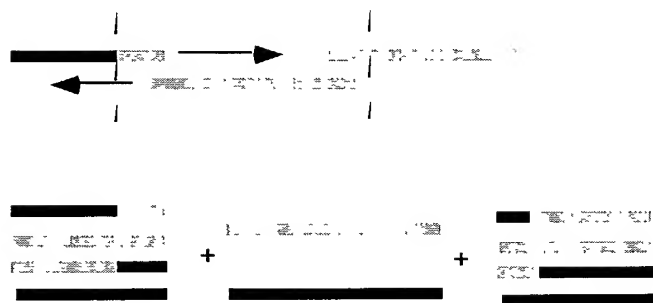
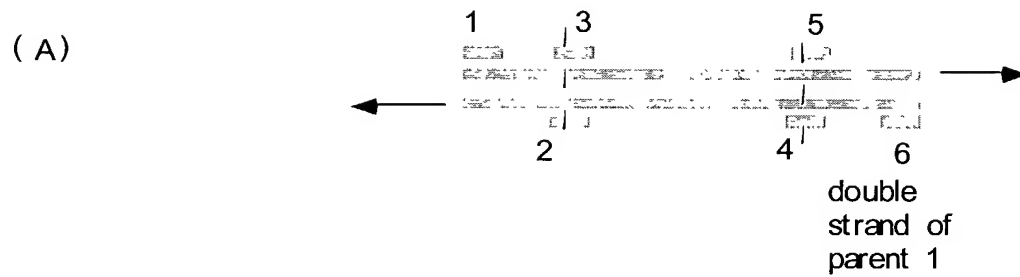


FIG. 7

library of recombinants
with crossovers in regions
of non-identity

FIG. 8

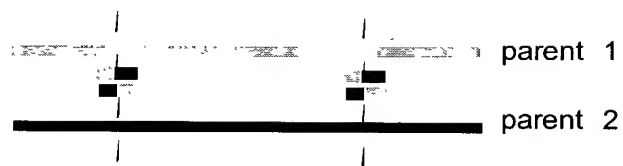


(B)

Reassemble fragments in a pool, by PCR with 1+ 6

FIG. 9

(A)



(B)



FIG. 10

Recombinant search algorithm

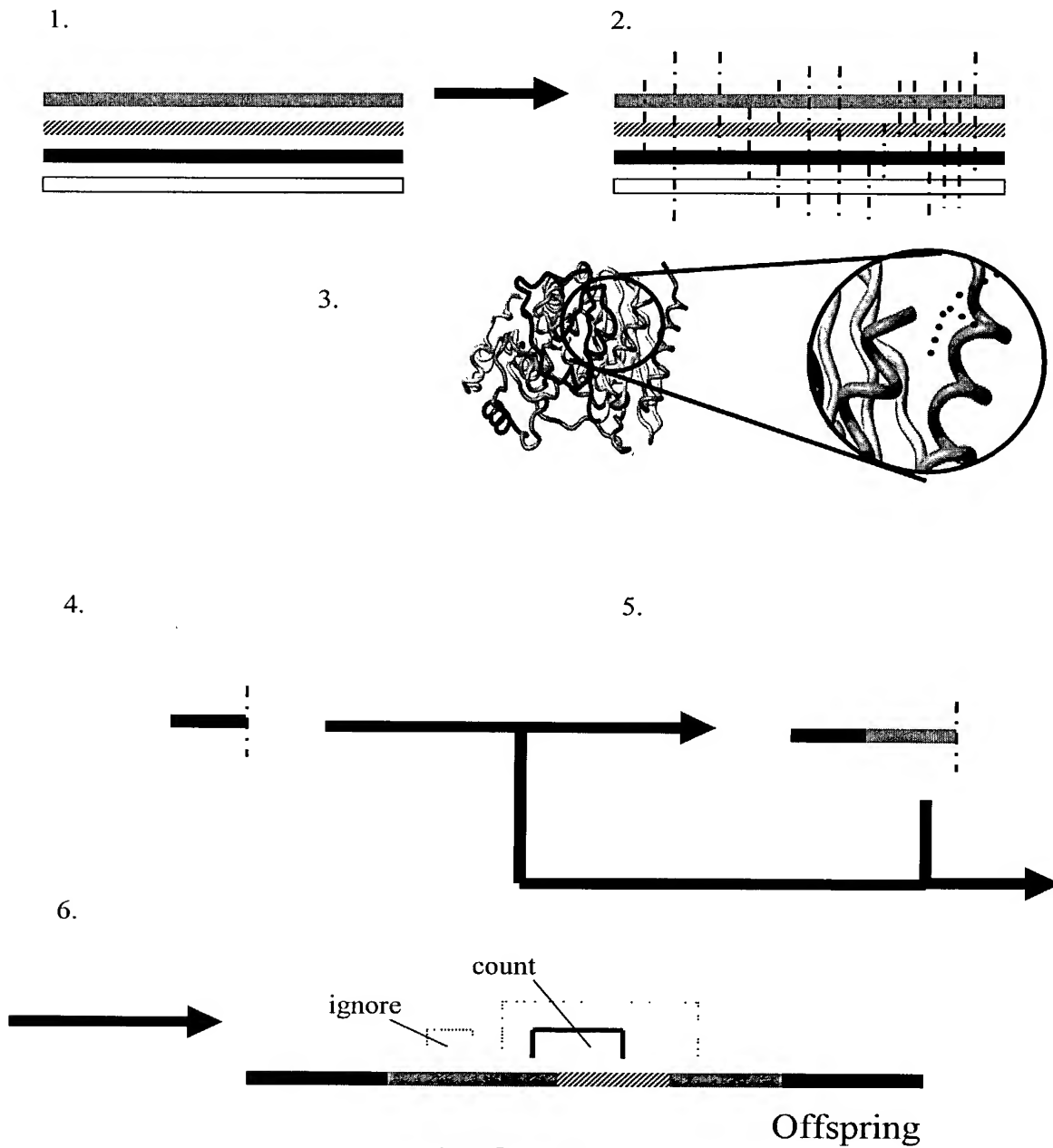


FIG. 12

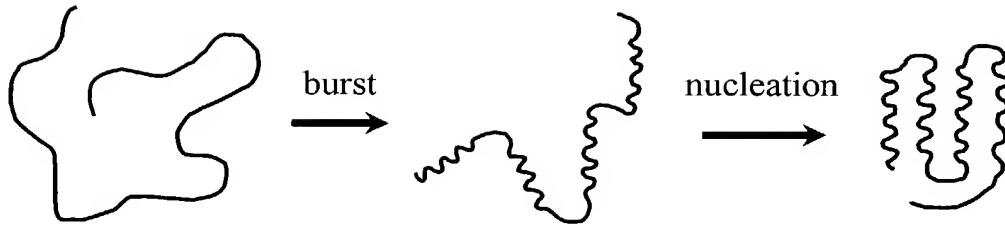
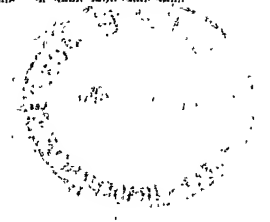


FIG. 18

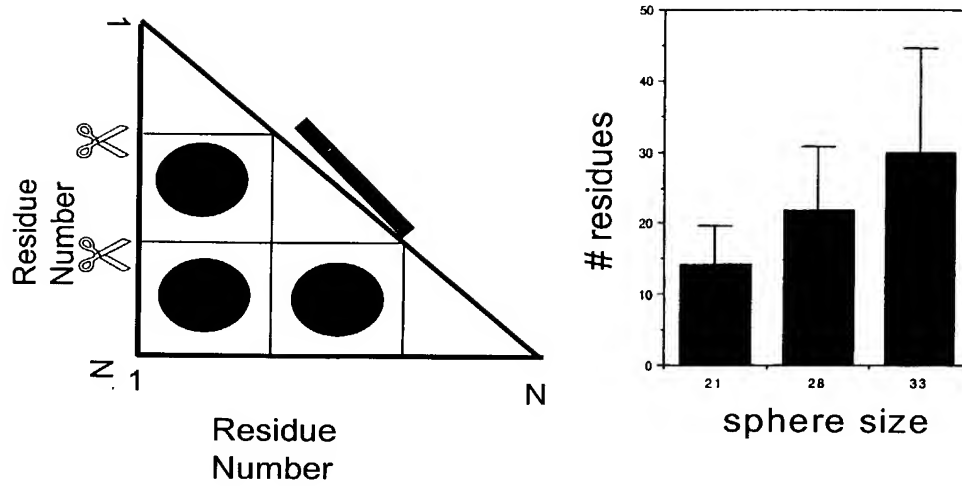


FIG. 19

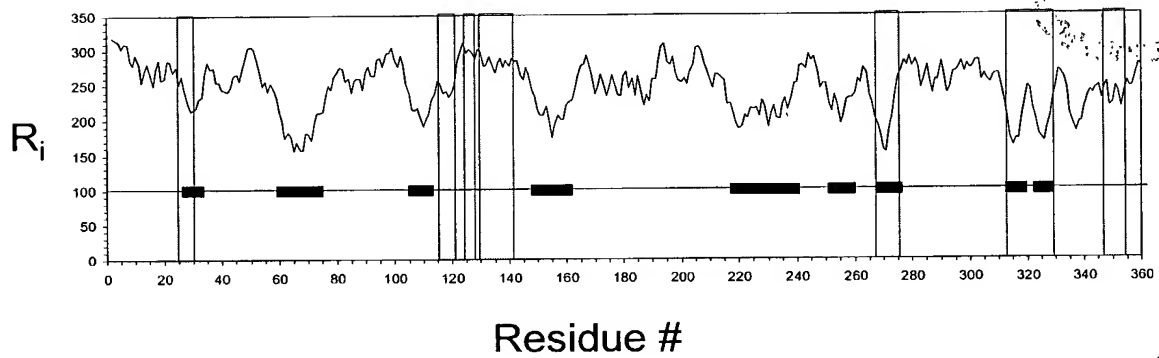


FIG. 22

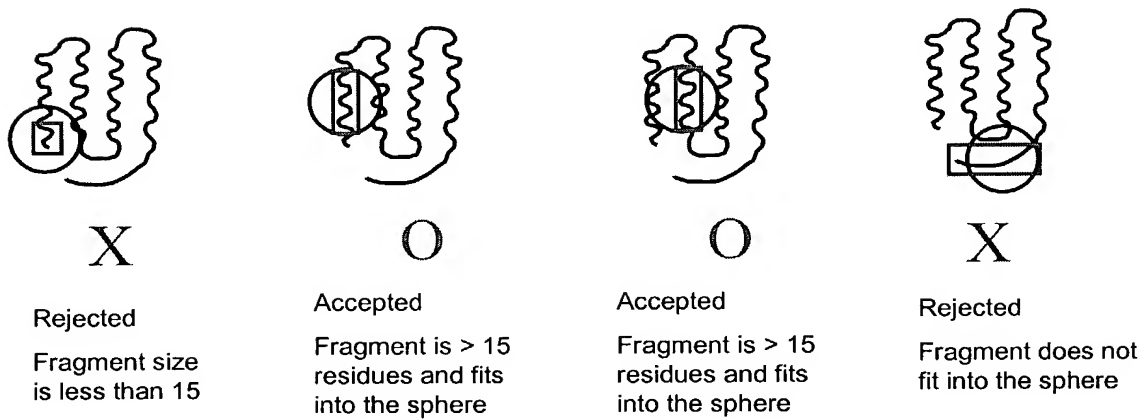


FIG. 23